

CECH, Miroslav; BELUSA, Miroslav

Interrelations of fetal hemoglobin and the acetylphenylhydrazine test in infants. Cesk pediat 17 no.2:130-135 F '62.

1. I detska klinika v Brne, prednosta prof. dr. Z. Brunecky.

(HEMOGLOBIN chem) (FETUS blood)
(PHENYLHYDRAZINE pharmacol)

CECH, Miroslav

Acetylphenylhydrazine test in alimentary methemoglobinemia. Cesk.
pediat. 17 no.4:312-320 Ap '62.

1. I detska klinika lekarske fakulty University J. Ev. Purkyně v Brně,
prednosta prof. MUDr. Z. Brunecký.

(PHENYLHYDRAZINE rel opds)
(METHEMOGLOBINEMIA in inf & child)

CECH, M.

Relation of the acetylphenylhydrazine test to hyperbilirubinemia
in newborn infants. Cesk. pediat. 19 no.12:1069-1077 D '64

1. I. detska klinika Lekarske fakulty University J.E.Furkyne
v Brne (prednosta prof. dr. Z.Brunecky, CSc.).

ULRICH, Jan; ~~CICH~~ O., st. trener V. Vacek

Letunov's function test in examination of canoeists. Cas. lek. cek.
98 no.2:47-55 9 Jan 59.

1. Vyzkumny ustav telovychovny, Praha, prednosta Dr. J. Merhautova
O. C., Praha 2, Na Bojisti 1.

(ATHLETICS, evaluation of Letunov's
canoeing, evaluation of Letunov's test in exam. of
canoeists (Cz))

~~CECH~~ Oldrich; DRAKOVA, Sona

Studies on the state of physical development of working adolescents
in Slovakia. Pracovni lek. 11 no.6:299-304 Aug 59.

1. Vyzkumny ustav telovychovny, red. MUDr. Merhautova Ustav hygieny
prace a chorob z povolani, red. prof. Teisinger.
(ADOLESCENCE)

STRYHAL, Fr.; CECHE, O.

Present significance of bifurcation osteotomy in the treatment of congenital hip dislocation. Acta chir. orthop. traum. cech. 26 no.5-6:558-560 1959.

1. I. ortopedická klinika v Praze, prednosta prof. dr. J. Jaros.
(HIP, fract. & disloc.)

CECH, O.; DRDKOVA, S.

Comparative anthropometric studies on Czech and Slovak girls entering employment.
p. 538.

CESKOSLOVENSKA HYGIENA. Praha, Czechoslovakia. Vol. 4, no. 9, Oct. 1959.

Monthly list of East European Accessions (EEAI) LC, Vol. 9, no. 1, January 1960.

Uncl.

DRDEKOVA, Sona; CECHE, Oldrich

Analysis of growth characteristics of adolescents entering the mining industry. Pracovní lek.13 no.1:23-27 F '61.

1. Ustav hygieny prace a chorob z povolani, Praha, reditel prof. dr. J.Teisinger. I. ortopedicka klinika KU, Praha, prednosta prof. dr. M.Jaros.

(MINING)

(VOCATIONAL EDUCATION)

(BODY CONSTITUTION)

DRDKOVA, Sona; CECH, Oldrich

Comparative anthropometric investigation of Czech and Slovak boys entering vocations. Cesk. hyg. 7 no.5:287-294 Je '62.

1. I klinika ortopedic a detske chirurgie, Praha.

(ANTHROPOMETRY in adolescence)
(INDUSTRIAL MEDICINE)

CECH, O.; SIREHAL, P.

Our experiences with autoplatic transplantation of cartilage
ears by the J.R. ~~Morgan~~ method in pseudarthrosis of the femoral
neck. Acta chir. orthop. traum. Cech. 31 no.3:209-215 Je '64.

I. I klinika pro ortopedickou a dětskou chirurgii v Praze
(prednosta prof. dr. M. Jaroš).

BENESOVA, M.; CECH, O.; DRDKOVA, S.

Principles of the treatment of congenital hip dislocation using Hanausek's device. Acta chir. orthop. traum. Cech. 32 no.3:239-244 Je '65.

Results of the treatment of congenital hip dislocation with Hanausek's device in children previously unsuccessfully treated by other methods. Ibid.:262-269

1. I. klinika pro ortopedii a detskou chirurgii fakulty vseobecného lékařství Karlovy University v Praze (prednosta prof. dr. M. Jaros).

CECH, Otto, MUDr.

Cooperation of district hygienists with regional planning
commissions. Cesk.zdravot. 8 no.8:477-479 Ag!60.

(PUBLIC HEALTH ADMINISTRATION)

MACASEK, Fedor, prom.chemik; CECH, Roman, prom.chemik

Chromatographic separation of radiochemically pure ⁹⁰Y from
mother isotope ⁹⁰Sr. Chem zvesti 19 no.2:107-114 '65.

1. Chair of Inorganic Chemistry and Radiochemistry of the
Faculty of Natural Sciences of Komensky University, Bratislava,
Smeralova 2 (for Macasek). 2. Division of Biochemistry and
Radiation Chemistry of the Research Institute of Food Conservation,
Bratislava, Trencianska 53 (for Cech).

L 7043-66 ERF(t)/ERF(b)/ERF(h) IJR(c) JD/JG

ACC NR: AP6001100

SOURCE CODE: CZ/0043/65/000/002/0107/0111

AUTHOR: Macesek, F.--Matsashak, F. (Graduate chemist); Cech, R.--Chekh, R. (Graduate chemist)

ORG. [Macesek] Faculty of Inorganic Chemistry and Radiochemistry, Department of Natural Sciences, Comenius University, Bratislava (Katedra anorganickej chemie a radiochemie Prirodovedeckej fakulty Univerzity Komenskeho); [Cech] Department of Biochemistry and Radiation Chemistry, Research Institute for Food Preservation, Bratislava (Oddelenie biochemie a radiacnej chemie Vyskumneho ustavu pre konzervaciu potraviny)

TITLE: Chromatographic separation of radiochemically pure Y sup 90 from the mother solution of Sr sup 90.

SOURCE: Chemicke zvesti, no.2, 1965, 107-114

TOPIC TAGS: chromatographic analysis, chemical separation, radiation chemistry, solution property, radio strontium, yttrium, radioisotope

ABSTRACT: The separation factor for the separation of RdY and RdSr in 0.01 M solutions of ethylene diamino tetraacetic acid at pH 4 - 4.5 is about 10^3 -- 10^4 . Influence of cations Ca, Zn, and Mg upon the separation is discussed; the influence changes with the concentration of the solution. Condition for separation on Dowex 50X2 in the NH_4 form (200--230 mesh, column 30 cm high, 0.44 cm² area) with elution by 0.01 M ethylene diamino tetraacetic acid at 5.11 pH is described. At a velocity Card 1/2

L 7043-66

ACC NR: AP6001100

of 0.8 ml/min a minimum 33 times elution of Y90 from Sr90 is obtained. The purity of the Y is over 99.9998 %. Orig art. has: 3 figures, 5 formulas, and 2 tables.

[JPRS]

SUB CODE: 07, 15, 20 / SUBM DATE: 10Jul64 / ORG REF: 004 / OTH REF: 008
SOV REF: 004

BC
Card 2/2

CECH, S.

The motion picture, a valuable aid in education. p. 24.
(ZELEZNICAR, Vol. 6, no. 1, Jan. 1956. Praha, Czechoslovakia.)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, no. 12, Dec. 1957.
Uncl.

Z/031/61/009/007/002/002
D007/D102

AUTHOR: Čech, S., Engineer

TITLE: Vertical forging presses

PERIODICAL: Strojírenská výroba, v. 9, no. 7, 1961, 350-353

TEXT: The article describes vertical forging presses produced by the Šmeralovy závody, n. p. (Šmeral Works, National Enterprise) in Brno. These presses meet and in many respect even surpass world standards. Their advantages are: A new overload protection system; great machine rigidity; and modern design. The production of vertical forging presses at the Šmeralovy závody started in 1951 with a 1,500 and a 2,500-ton type. Later on, the production was expanded and modernized and the present LKM series includes vertical forging presses with capacities of 630, 1,000, 1,600, 2,500 and 4,000 tons. Overload protection is provided for by a wedge held in position by a spring designed to withstand a definite forging pressure. If this pressure is exceeded, the spring gives way and the wedge slides to the left, turning a screw and a lever. These in turn, rotate an

Card 1/2

Vertical forging presses

Z/031/61/009/007/002/002
D007/D102

eccentric pivot which prevents the ram from reaching its bottom position. The press is equipped with a pneumatically-controlled disc clutch and a disc brake which is mechanically coupled with the clutch. The press is electropneumatically-controlled by means of a pedal and allows the following operation modes: Single lifts; repeated lifts; continuous operation; and adjustment (the ram stops in any position upon release of the pedal). Forgings are removed by top and bottom mechanical ejectors. The output of these vertical forging presses is approximately 200% larger than that of comparable screw presses or power hammers, since each operation is completed in a single stroke. There are 5 figures and 1 table.

ASSOCIATION: Šmeralovy závody, n. p., Brno (Šmeral Works, National Enterprise, Brno).

Card 2/2

S/081/62/000/019/045/053
B101/B180

AUTHORS: Cech, Svatopluk, Markes, Rudolf

TITLE: Method of producing porous polyamide, particularly poly-
capronamide

PERIODICAL: Referativnyy zhurnal, Khimiya. no. 19, 1962, 555, abstract
19P350 (Czech. patent 98683, February 15, 1961)

TEXT: Polyamide in the form of fibers or crumbs is filled into an open
mold. The mold is placed into a closed vessel and treated under pressure
with water vapor at 150-180°C for 10-15 min. A porous substance with a
volume weight of ~ 0.05 g/cm³ is obtained. [Abstracter's note: Complete
translation.] ✓

Card 1/1

CECH, V.

CECH, V. Business accounting in the rolling mills of the Molotov
Ironworks. p. 217.

V. K. Soviet experience in the production of steel for transformers..
p. 219.

Vol. 6, no. 7, July 1956

HUTNIK

TECHNOLOGY

Czechoslovakia

So: East European Accession, Vol. 6, No. 5, May 1957

CECH, V.

04

Geology and genesis of the iron and nickel ores near Křemlo, southern Bohemia. Vladimír Čech and Jaromír Koutek. *Sborník Stá. Geol. Ústavu Českoslov. Rep.* 13, 1-19 (in French, 14-19) (1946).—Description of lateritic Fe ores and Ni-Mg hydrous silicates. Many analyses of drill cores are given. Michael Fleischer

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

Deposit of manganese ore at Jindřichov Hradec.
Vladimír Čech. *Věstník Stá. Geol. Ústavu Rep. Česko-*
slav. 23, 258-60 (1948) (English summary).—The Mn
mineral, microscopically amorphous and of black color,
for which the name manganomelan was proposed, cements
grains of quartz and feldspar with muscovite scales to form
a fine-grained sandstone. An av. sample contained
29.35% MnO_2 and 2.07% Fe. The manganese sandstone
occurs in kidney-shaped concretions up to 1 sq. m. They
were probably formed by selective pptn., with the aid of
microorganisms, of the Mn leached out together with iron
during the weathering of the gneisses. A. Langer

Cech, V.; P. POVONDRA; SULCEK, Z.

In memory of Vaclav Vesely; a biographic note. p. 289. (Vestnik, Praha. Vol 31, no. 6, 1956.)

SO: Monthly List of East European Accession (EEAL) LC, Vol. 6, no. 7, July 1957. Uncl.

CECH, V.

10th anniversary of University of Mechanical and Electrical Engineering in Plzen.
p. 392.

STROJIRENSTVI. (Ministerstvo tezkého strojírenství, Ministerstvo přesného
strojírenství a Ministerstvo automobilového průmyslu a zemědělských strojů) Praha,
Czechoslovakia. Vol. 9, no. 5, May 1959.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, no. 10, Oct. 1959. Uncl.

CECH, Vladimir

Future of higher technical education. Elektrotechnik 18
no. 12:337-338 D '63.

CZECHOSLOVAKIA

CECH, V.

Central Geological Institute (Ustredni ustav geologicky),
Prague,

Prague, Casopis pro mineralogii a geologii, No 3, 1964,
pp 291-298

"Contribution to the Geology and Petrography of the Tabor
Syenite Massif."

CECH, Vladimir

Contribution to the geology and petrography of the synite
Tabor Massif. Cas min geol 9 no.3:291-299 '64.

1. Central Geological Institute, Prague.

Veterinary Medicine

CZ/0077/66/000/005/0216/0220

CZECHOSLOVAKIA

AUTHOR: Cech, Zdenek (Doctor of veterinary medicine; Candidate of science; Brno)

ORG: none

TITLE: Magnets for the prevention of traumatic reticuloperitonitis

SOURCE: Veterinarstvi, no. 5, 1966, 216-220

TOPIC TAGS: veterinary medicine, commercial animal, digestive system

ABSTRACT: In Czechoslovakia about 25,000 to 30,000 of about 4,000,000 cattle suffer from injuries caused by foreign bodies in their rumen. Surgery does not prevent recurrence of the same difficulties. Since 1954 rod magnets are employed to attract the swallowed ferromagnetic objects and prevent damage to the rumen walls. The author lists in two tables different types of covered and uncovered magnets used by different countries for this purpose. Certain shortcomings of the uncovered magnet are described. Since 1963 the so-called "cage magnets" are employed. They consist of a centrally located magnet, the size of a finger, surrounded by a plastic loop in the space between the magnet and the loop partitions. Foreign bodies can be stored without injury to the membrane. The Chair of Surgery, Orthopedy and Roentgenology in Brno conducted a test with a cage magnet on a cow for 52 days. The test showed that with present feeding methods the space between the magnet and the loop does not

long, can be attracted and that the PVC cage does not fully protect the stomach walls from longer foreign bodies. A three-grooved covered ferrite has been developed since 1964. It has the advantage of not attracting foreign bodies horizontally, nor can the objects slip through the spaces between the ferrite and the plastic partitions. The magnets can be used preventively and therapeutically for the removal of metal objects before rumen operations. In Czechoslovakia both magnets and ferrites are used for that purpose. Orig. art. has: 2 tables and 2 figures. [KS]

2/2

- 224 -

L 24648-66

ACC NR: AP6014617

(A)

SOURCE CODE: CZ/0077/66/000/005/0216/0220

AUTHOR: Cech, Zdenek (Doctor of veterinary medicine; Candidate of science; Brno)

ORG: none

TITLE: Magnets for the prevention of traumatic reticuloperitonitis

SOURCE: Veterinarstvi, no. 5, 1966, 216-220

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ABSTRACT: In Czechoslovakia about 25,000 to 30,000 of about 4,000,000 cattle suffer from injuries caused by foreign bodies in their rumen. Surgery does not prevent recurrence of the same difficulties. Since 1954 rod magnets are employed to attract the swallowed ferromagnetic objects and prevent damage to the rumen walls. The author lists in two tables different types of covered and uncovered magnets used by different countries for this purpose. Certain shortcomings of the uncovered magnets are described. Since 1963 the so-called "cage magnets" are employed. They consist of a centrally located magnet, the size of a finger, surrounded by a plastic loop in the space between the magnet and the loop partitions. Foreign bodies can be stored without injury to the membrane. The Chair of Surgery, Orthopedy and Roentgenology in Brno conducted a test with a cage magnet on a cow for 52 days. The test showed that with present feeding methods the space between the magnet and the loop does not fill up within 52 days. It also proved that ferromagnetic objects, up to 6.5 cm

Card 1/2

L 24648-66

ACC NR: AP6014617

long, can be attracted and that the PVC cage does not fully protect the stomach walls from longer foreign bodies. A three-grooved covered ferrite has been developed since 1964. It has the advantage not attracting foreign bodies horizontally, nor can the objects slip through the spaces between the ferrite and the plastic partitions. The magnets can be used preventively and therapeutically for the removal of metal objects before rumen operations. In Czechoslovakia both magnets and ferrites are used for that purpose. Orig. art. has: 2 tables and 2 figures. [KS]

SUB CODE: 02/ SUBM DATE: none

Card

2/2 *pla*

Czech, W.										PROCESSING AND PROPERTIES INDEX									
ca										25									
Czechoslovakian dye industry. Wokietch Czech. <i>Průmysl Chem.</i> 4, 403-6(1948).—An historical review of the Czechoslovakian coal-tar dye industry is given. Present and planned output of individual dyes is discussed in detail. Frank Gouet																			
ASB-SEA METALLURGICAL LITERATURE CLASSIFICATION										SUBJECT INDEX									
SECONDARY INDEX										SUBJECT INDEX									
SECONDARY INDEX										SUBJECT INDEX									

CECH, Zdenek

CZECHOSLOVAKIA

MVDr

Moravska Trebova

Prague, Veterinarstvi, No 11, Nov 62, pp 345-347.

"Sectio Caesarea Conservativa in a Goat"

DOSTAL, Jaroslav, MUDr.; CECHE, S., techn. spolupraci.

Electrokymography. Vnitr. lek., Brno 1 no.6:441-449 June 55.

1. Z I. vnitřní kliniky MU v Brně, přednosta prof. MUDr. M. Stejfa,
MUDr. J. D. Brno, Jiráskova 1.
(KYMAGRAPHY
electrokymography.)

CECHAK, O.

"Automation in machinery industry" by A.N.Rabanovic. Reviewed by O.
Cechak. Jemna mech opt 5 no.9:291 S '60.

CECHLATYJ F. Ch. Akademik Medicinskych nauk USSR. XIV. Cislo venovane
 oboru pracovniho lekarstvi. O nekterych uspesich v oboru hygieny prace a nemoci
 z povolani Some successes in the sphere of the hygiene of work and occupational diseases
 Casopis Lekarů Ceskych, Prague (Czechoslovakia) 1947, 86/7 (195-198)

Although the chemical industry has grown in Russia, occupational poisoning is diminishing quantitatively and qualitatively (particularly that due to lead and mercury). The credit is due to the institute of hygiene of work and occupational diseases. The government decreed laws prohibiting the use of a certain number of toxic substances in industry, and these were replaced by non-toxic substances. Remarkable successes were achieved in combating trinitrotoluene intoxications. Blood, bile, and urine tests for TNT content, using a new method specially devised, showed that TNT, which German experts regard as non-toxic, is a specific poison which produces a toxic dystrophy of the liver. An unusual kind of prophylactic sanitary institution was established, whereby the workers underwent a prophylactic course two or three times a year. In recent years, occupational intoxications have been successfully treated with vitamins, especially C and B, which also have preventive value. First-aid in acute poisoning consists of inhalation of 50 per cent oxygen in air, with a pause every half hour. To determine the capacity for work, laboratory estimation is made of the maximal consumption of oxygen during muscular work (re placing the estimation of basal metabolism). This varies with training, age, sex, and muscular development. A special laboratory studies rational movements at work, and the biomechanical staff interpret the findings to the makers of machines. Studies on the influence of muscle stimulants have confirmed the improved results with phenamine (increase of work potential by 77-154 per cent), and the good results with carbocholine, proserine, and thiamine. These substances probably facilitate

Page 2

the transmission of impulses from nerves to muscles. The influence of the weather on some kinds of work was investigated in a special climatic room, in which different kinds of climate could be reproduced and their effect on the worker studied.

Wolf-Prague

So: Medical Microbiology and Hygiene, Section IV, Vol. I, #1-6

KOTASEK, A.; VINSOVA, N.; BENDL, J.; CERVENKA, J.; CECHEME, E.

Perinatal mortality in late gestoses. Cesk. gynek. 29
no.6:470-478 Ag '64.

I. Gyn.-por. klin. fak. vseob. lek. Karlovy University v
Praze (prednosta prof. dr. K. Klaus, DrSc.) a II. gyn.-por.
klin. fak. vseob. lek. Karlovy University v Praze (prednosta
prof. dr. J. Lukas, DrSc.).

L 31421-66 FCC GW/WS-2

ACC NR: AP6022983

SOURCE CODE: CZ/0085/65/000/003/0063/0065

AUTHOR: Cechova, Eva; Vitek, Vojtech

ORG: UFA CSAV

TITLE: Remarks on the study of the ellipticity of the circumpolar vortex by means of zonal harmonic analysis

SOURCE: Meteorologické spravy, no. 3, 1965, 63-65

TOPIC TAGS: atmospheric pressure¹², vortex, atmospheric model, heat source, harmonic analysis, atmospheric property

ABSTRACT: The ellipticity of the circumpolar vortex is studied by means of zonal harmonic analysis of the pressure field for 45° N. On the basis of a simple theoretical model, a relation is shown between the second harmonic component of the pressure field and large scale heat sources induced by the locations of the oceans and continents. Orig. art. has: 2 figures and 9 formulas. [Based on authors' Eng. abst.]
[JPRS]

SUB CODE: 04 / SUBM DATE: none / SOV REF: 001 / OTH REF: 013

Cord: 1/1

UDC: 551.515.3 (98)

CECHOVA, H.

Supplementary compensation for over-fulfilling the planned consumption of working units. p. 21. (ROLNICKE HLASY, Vol. 10, No. 7, July 1956, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 12, Dec 1957. Uncl.

JANOUSEK, Ivan; CECHOVA, Drahomira, inz.

Photometric determination of silicon in cast iron and silicon steels. Hut listy 19 no. 2: 128-130 F '64.

1. Vyzkumny a zkusebni ustav, Zavody V. I. Lenina, Plzen.

CECHOVA, E.

Comparison of some solutions of the barotropic vorticity equation. Meteor zpravy 17 no.6:184-188 D '64.

1. Institute of Atmospheric Physics of the Czechoslovak Academy of Sciences, Prague.

CECHOVA, Eva

Effect of the topographical factor on the quality of numerical
barotropic forecasts. ~~Meteor~~ zpravy 18 no.1:6-9 F '65.

1. Institute of Atmospheric Physics of the Czechoslovak Academy
of Sciences, Prague.

CZECHOSLOVAKIA

CECHOVA, L.

First Stomatological Clinic of the Faculty of General
Medicine of KU (I. stomatologická klinika fakulty
všeobecného lékařství KU), Prague

Prague, Coskoslovenska stomatologie, No 4, 1963, pp 265-
267

"Contribution to the History of Silicate Cements."

CECHOVA J.

Effect of pH of cements on the pulp. Cesk. stomat. 66 no.1:
37-42 Ja '66.

1. I. stomatologická klinika fakulty všeobecného lékařství
Karlovy University v Praze (prednosta prof. dr. J. Toman
DrSc.).

CECHOVA, M.

CECHOVA, M. Work spent on the breeding of the parent animals is paying off.
p. 31.

Vol. 10, no. 12, Dec. 1956
ROLNICKÉ HLASY
AGRICULTURE
Czechoslovakia

So: East European Accession, Vol. 6, No. 5, May 1957

CECHOVA, M.

Division into sections will help collective farms in mountainous regions to overcome difficulties; an example from the Lichkov Collective Farm. p. 28
(Rolnicke Hlasy Vol. 11, no. 1, Jan. 1957 Praha)

SO: Monthly List of East European Accession (EEAL) 10, Vol. 6, no. 7, July 1957. "encl.

CECHOVA, K.

A new system of machine milking. p. 24 (Rolnicke Hlasy Vol. 11, no. 4, Apr. 1957 Praha)

SC: Monthly List of East European Accession (HEAL) LC, Vol. 6, no. 7, July 1957. Uncl.

CECHOVA, M.

Old and new on composts.

P. 10, (Rolnicke Hlasy) Vol. 11, no. 7, July 1957, Praha, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) Vol. 6, No. 11 November 1957

CECHOVA, M.

Why is the build up of collective farms lagging behind in Turnov County?

p. 14 (Rolnicke Hlasy, Vol. 11, No. 9, Sept. 1957, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, No. 2,
February 1958

CECHOVA, M.

Collective-farm members helped to establish a collective farm.

P. 5, (Rolnicke Hlasy) Vol. 30, no. 4, Aug, 1957, Praha, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) Vol. 6, No. 11 November 1957

CECHOVIC, R.

CECHOVIC, R. Another means of mechanization. p. (4) of cover.

Vol. 6, No. 16, Aug. 1956.

MECHANISACE ZEMEDLSTVI.

AGRICULTURE

Praha, Czechoslovakia

So: East European Accession, Vol. 6, No. 3, March 1957

GECHOVIC, Vsevolod

c/1962
DECEASED

1964

GEOLOGY

~~SECRET~~ C E C H O V A, S.
Category: Czechoslovakia/Analytical Chemistry - Analysis of organic substances. G-3

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 31108

Author : Hajek Stanislav, Cechova Svatava

Inst : not given

Title : Identification of Minimum Amounts of Blood in Forensic Medicine

Orig Pub: Univ. Carolina Med., 1955, 1, No 1, 33-40

Abstract: For the recovery of the coloring matter of blood from strongly concentrated [sic] solutions it is proposed to use Al_2O_3 compressed into glass tubes (diameter 0.5, length 4 cm). At the bottom the tubes are closed by corks through which extends a capillary; a layer of cotton wool is inserted between the cork and the Al_2O_3 column. The liquid under investigation is made to flow through the column, the coloring matter of blood, retained in the Al_2O_3 , is transferred to a glass slide and is treated with pyridine, $Na_2S_2O_4$ and KOH, to convert it into hemochromogen, which is then determined by the microspectroscopic method.

Card : 1/2

-18-

POLAND

SZMUNESS, Wolf; SIKORSKA, Jadwiga; SZYMANEK, Elzbieta; MIKOSZ, Aleksander, and CECHOWICZ, Lucja; Regional Sanitation-Epidemiology Center (Wojewodzka Stacja Sanitarno-Epidemiologiczna,) Head (Dyrektor) C. HOROCH, MD, Lublin.

"Possibilities of Dissemination of Salmonella enteritidis Infections by the Respiratory Route."

Warsaw, Przegląd Epidemiologiczny, Vol 19, No 4, 1965; pp 433-439.

Abstract [English summary modified]: Strains of antibiotic-resistant Salmonella enteritidis were isolated from the throat and nose swabbings of 37 out of a total of 131 children infected with the microbe in five hospital foci. Most were quite young, below 1 year of age. Carrier state was usually permanent. Three tables, 1 Soviet, 16 Western references.

1/1

~~CECHOWICZ, Waldemar; HRYNIEWICZ, Henrykh~~

Zoological and ecological studies on small mammals in natural foci of leptospirosis in the Lublin province. Przegl. epidem., Warsz. 12 no.1: 25-28 1958.

1. Z Zakładu Anatropozoonoz Instytutu Medycyny Pracy i Higieny Wsi w Lublinie.

(LEPTOSPIROSIS, epidemiology,
swamp fever in Poland, in small animals (Pol))

CECHURA, FRANTISEK

Dolni merictvi; kompendium. Celostatni vysokoskolska ucebnice. (Vyd. 1.)
Praha, Statni nakl. technicke literatury. (Measurement in mining. 1st ed.
illus., diagrs., graphs, tables)
Vol. 2, pt. 1. 1956. 449 p.

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 8, Aug 1957. Uncl.

✓ Loss of Iron in the Slag in the Open-Hearth Process. F. Cochrane. (Hutnick Listy, 1958, 11, (2), 86-91). (In Czech). Iron losses are shown to be least if lime is charged between two layers of ore, and greatest if the bottom layer of ore is omitted. The effects of preheating the charge before admitting the liquid iron were studied. The time of preheating which just leads to a rising of the iron content in the primary slag is best, resulting in the optimum utilization of the manganese in the charge and to more complete dephosphorization. More intense preheating results in increasing iron losses. — P. 7.

Metal 1

ACC NR: AP6012016 ENP(w)/ENA(d)/T/ENP(t) IJP(c) JD

SOURCE CODE: CZ/0057/65/000/004/0167/0171

AUTHOR: Cechura, Frantisek (Engineer); Rozsypal, Rostislav (Engineer)

ORG: TZVRSR, Trinec

TITLE: Inclination of rail steel to flakiness

SOURCE: Hutnik, no. 4. 1965, 167-171

TOPIC TAGS: structural steel, fabricated structural metal, metallurgic furnace, bauxite

ABSTRACT: A study of 184 charges was made. The rails containing flakes showed a higher strength; rails from the 50 ton furnaces had a strength over 81 kg/mm sq, and from the 130 ton furnace 82 kg/mm sq. The charges containing flakes had less S and more Si; they had a shorter residence in the soaking furnace. Charges that were carbonized showed higher flakiness than those that were not. Addition of bauxite, rate of decarbonization, carbon content during melting down had no influence upon the flakiness of the product. The present equipment in the authors' works does not allow a continuous production of high strength rails. Orig. art. has: 4 figures and 6 tables. [JPRS]

SUB CODE: 13 / SUBM DATE: none / ORIG REF: 003

Cord 1/1 *ffc*

24
B

C ECHURA, JAN.

✓ 431* Production of Pump Wheel Castings. Výroba odlitků oběžných koleček čerpadel. (Czech.) Vítězslav Batěk and Jan Čechura. Středemství, v. 3, no. 9, Sept. 1955, p. 273-274. HZ
*Design measures to reduce expansion scabs, sand inclusions, gas holes, coldshuts, and hot tears for defect-free castings. Diagram, photographs.

①
of
met

ST. CECIU

RUMANIA/Chemical Technology - Chemical Products and Their
Application, Part 4. - Cellulose and Its
Derivatives, Paper.

H-33

Abs Jour : Ref Zhur - Khimiya, No 14, 1958, 49025

Author : D. Duhnea, St. Ceciu.

Inst : -

Title : Experimental Results of Ground Wood Preparation of
Poplar and of Its Utilization in Newsprint Composition.

Orig Pub : Celuloza si hirtie, 1957, 6, No 5, 175-176

Abstract : The tension strength of poplar ground wood (GW) made of
wood specimens containing 19.52 to 44.8% of moisture,
density 394 to 546 kg per cub.m and 110 to 300 mm in
dia. is low (1686 m) as compared with the tension
strength of fir GW (2647 m). The strength of paper is
lower and the number of tearings in the machine increa-
ses in consequence of the above, which causes a drop of
the machine rate. The strength of paper of 25 parts of

Card 1/2

CECIU, St., ing.

Improving the quality of the newsprint obtained on the No.8
machine of the Paper Factory, Rusteni. Cel hirtie 13 no.5/6:
200-207 My-Je'64.

CEGIU, St., ing.

Research on the influence of the constituents of mechanical
wood pulp on its quality. Cel hirtis 13 no.7:238-244 J1'64

CECIU, St., ing.

Manufacture of electric insulating paper. Cel hirtie 13 no.10:
359-365 0 '64.

CECS, Maria

An account on the Balatonfured Colloquium on the Physics of Solids.
Magy.tud. 66 no.12:663-664 D '59. (EEA1 9:4)
(Hungary--Solids)

CECOK, Lj.

Calculous pyonephrosis of the pelvic ectopic kidneys. Acta chir. iugosl. 1 no,1-2:167-172 1954.

1. Uroloska klinika Medicinskog fakulteta u Beogradu. (Upravnik doc. dr. S.Petkovic)

(KIDNEYS, abnorm.

*pelvic, with calculous pyonephrosis, surg.)

(KIDNEYS, dis.

*pyonephrosis, calculous, with pelvic kidney, surg.)

(ABNORMALITIES

*pelvic kidney, with calculous pyonephrosis, surg.)

(KIDNEYS, calculi

*with pyonephrosis of pelvic kidney, surg.)

(CALCULI

*kidneys, with pyonephrosis of pelvic kidney, surg.)

CVETKOVIC, B.; CECUK, L.

~~CVETKOVIC, B.; CECUK, L.~~
Clinical picture of testicular tumore. Srpski arh.celoklek.83
no.2:180-187 Feb '55.

1. Uroloska klinika Medicinskog fakulteta u Beogradu.Upravnik:
doc. dr. Sava Petkovic.

(TESTES, neoplasms,
diag.,pathol. & ther.(Ser))

CECUK, Ljubomir, dr.; CAVKA, Tomislav, dr.

Familial polyposis of the small intestine with the appearance of spots on the lips and oral mucosa - Peutz syndrome. Lijec. vjes. 81 no.11:847-854 '59.

1. Iz Kirurske klinike Medicinskog fakulteta u Zagrebu i Opće bolnice u Knjnu.
(POLYPI case reports)

IVANISEVIC, Boris, Dr.; CICIN-SAIN, Sime, Dr.; CECOK, Ljubomir, Dr.

Congenital malignant mixed tumor of the kidney - Wilms tumor. Lijec
vjes 82 no.11:857-864 '60.

1. Iz Kirurske klinike i Zavoda za kliniku rentgenologiju Medicinskog
fakulteta Sveucilista u Zagrebu.

(NEPHROBLASTOMA in inf & child)

(KIDNEYS neopl)

YUGOSLAVIA

ČEČUK, Dr Ljubomir, Surgical Clinic (Kirurška Klinika), Faculty of Medicine (Medicinski Fakultet), Zagreb.

"Acute Retention of Urine."

Zagreb, Liječnički Vjesnik, Vol 85, No 9, September 1963, pp 1001-1004.

Abstract: [Author's German summary modified] The article lists the causes for the inability to urinate and emergency measures to apply to relieve such cases, in which connection it is of the utmost importance to observe all the rules of aseptic practice, inasmuch as the most common causative agents of infections in the urinary tract (Klebsiella, B. Proteus, and Pyozyaneus) are known to be resistant to most antibiotics used in therapy. Patients with prolonged incomplete urine retention need particular attention, since the infection is often severe in such cases and can lead to a lethal outcome. Hospital treatment is essential, since an operation can produce definitive relief in the majority of cases.

No references.

1/1

- 10 -

CECOK, O.

YOSIAC, J.
BUNJAK (in caps); Given Name
Country: Yugoslavia
Academic Degree: not given
Affiliation: Department of Radiobiology, Institute of Nuclear Sciences
"Boris Kidrich"
Source: Belgrade-Vintcha, Bulletin of the Institute of Nuclear Sciences
"Boris Kidrich", Vol 11, Mar 1961, pp 209-217.
Data: "The Action of Ultraviolet Radiation on Mammalian Cells Viability
and Metabolism of Nucleic Acid."
Co-authors:
CECOK, O., Department of Radiobiology, Institute of Nuclear Sciences
"Boris Kidrich",
KANAZIR, D., Department of Radiobiology, Institute of Nuclear Sciences
"Boris Kidrich".

KOSTIC, Lj.; CECUK, O.; KANAZIR, D.

Ultraviolet radiation and its effect on the viability of mammalian cells and the metabolism of nucleic acids. Bul Inst Nucl 11:209-217 '61.

1. Institute of Nuclear Sciences "Boris Kidrich," Department of Radiobiology, Vinca. 2. Member of the Editorial Board, "Bulletin of the Institute of Nuclear Sciences 'Boris Kidrich'" (for Kanazir).

CECULESCU, A.

MARTYNOVA, N.V., kand.med.nauk; TSETSOLESKU, A. [Ceculescu, A.]

On roentgenodia gnosis of extrauterine pregnancy. Akush.i gin. 35
no.4:75-77 JI-Ag '59. (MIRA 12:11)

1. Iz TSentral'noy bol'nitsy (glavnyy vrach E.V. Eyzenbraun) Ukhto-
kombinata Sovnarkhoza Komi ASSR.
(PREGNANCY EXTOPIC radiography)

CECULESCU, A.

TSETSULESKU, A. (g. Ukhta Komi ASSR).

Pneumoperitoneum in the x-ray diagnosis of gynecological diseases.
Vest. rent. 1 rad. 33 no.6:12-19 N-0 '58. (MIRA 12:1)

1. Iz ginekologicheskogo otdeleniya (zav. - kand. med. nauk N.V. Martynova) Tsentral'noy bol'nitsy Ukhtkombinata Komi Sovnarkhoza (glavnyy vrach E. V. Ryzenbraun).

(PNEUMOPERITONEUM, ARTIFICIAL

diag. value in gyn. dis. (Rus))

CECULESCU, A.

TSETSULESKU, A., Cand Med Sci -- (diss) "Test of the application of pneumoperitoneuma and tomography in x-ray diagnostics of gynecological ailments." Moscow, 1960. 16 pp; (State Scientific Research X-ray Radiological Inst of the Ministry of Public Health RSFSR); 200 copies; free; (KL, 17-60, 173)

CECULESCU, A.

TSETSULESKU, A. (Komi ASSR Ukhta, Studencheskaya ul., dom.15, kv.10)

Use of double and triple gas contrasting in association with
tomography in diseases of the bladder and perivesicular tissue.
Vest.rent.1 rad. 35 no.1:28-33 Ja-F '60. (MIRA 13:6)

1. Iz rentgenologicheskogo otdelenia (zav. A. Tsetsulesku)
TSentral'noy bol'nitsy Ukhtkombinata Komi Sovnarkhoza (glavnyy
vrach - zasluzhennyy vrach Komi ASSR E.V. Myzenbraun).
(BLADDER radiogr.)

CEDIGHIAN, Suren, dr. ing. (Bucuresti)

A general survey of the permanent magnets made of Alni and Alnico alloys prepared in Rumania. Electrotehnica 11 no. 11/12:401-407 N-D '63.

1. Head of Magnet Foundry, "Electromagnetica" Plant.

L 41677-66 EWP(t)/ETI LJP(c) JG/HW/JD
ACC-NR: AP6031208

SOURCE CODE: RU/0004/65/000/005/0192/0197

AUTHOR: Cedighian, Suren (Engineer)

ORG: "Electromagnetica" Works, Bucharest (Uzinele "Electromagnetica")

TITLE: Thermocompensating alloy for speedometers

SOURCE: Electrotehnica, no. 5, 1965, 192-197

TOPIC TAGS: chromium alloy, nickel alloy, velocity measuring instrument

ABSTRACT: The author discusses an alloy based on chromium and nickel which compensates for temperature errors in permanent magnets (at positive or negative temperatures), and gives some experimental data relating to its successful use in speedometer construction. With only slight composition changes the alloy may also be used in rotation meters, electric meters and other measuring devices. Orig. art. has: 5 figures, 4 formulas and 3 tables. [Based on author's Eng. abst.] [JPRS: 32,482]

SUB CODE: 11, 13 / SUBM DATE: 20Jan65 / ORIG REF: 002 / OTH REF: 005

Card 1/1 hs

UDC: 621.315.554:621.317.39

0918 2641

27
Magnesium determination through precipitation with potassium stearate with Eriochrome Black T indicator. D. Cădușescu. Acad. rep. populare Romîne, Baza cercetărilor științ. Timișoara, Studii cercetări științ., Ser. științe chim. 4, No. 3-4, 97-102 (1957).—The total hardness of water was previously detd. through titration with K stearate with Eriochrome Black T as indicator. It is shown that this method is applicable to the separate detn. of Mg after the pptn. of Ca as oxalate. The K oxalate should not exceed 50-75 mg., otherwise it interferes with the formation of the eriochrome-Mg complex. J. Hering

2
452
2 May

17

CEE, Ales; ADAMEK, Milan

Contribution to the degradation kinetics of diazo-p-toluidine
nitrate. Chem prum 12 no.9:497-498 S '62.

1. Vyzkumny ustav organickych syntez, Pardubice - Rybitvi
(for Cee). 2. Vysoka skola chemickotechnologicka,
Pardubice (for Adamek).

CEE, Ales

Device for obtaining thin layers in thin-layer chromatography with binder. Chem listy 59 no.6:739-741 Je '65.

1. Research Institute of Organic Syntheses, Pardubice-Rybitvi.
Submitted October 29, 1964.

20

CZECHOSLOVAKIA

CEE, C., MD; DURA, J., MD; POUPOVA, A., Prom. Dr.

1. Internal Medicine Ward of the Hospital (Vnitřní oddělení nemocnice), Městec Kralove; 2. OUNZ, Nymburk;
3. Institute of Pathological Anatomy VLA (Patolog. anatom. ústav VLA), Hradec Kralove

Prague, Vnitřní lékařství, No 12, 1963, pp 1204-1206

"Rupture of the Chordae of the Papillary Muscle in Myocardial Infarction."

KANKA, J.; SCHON, E.; STASTNA, J.; CEE, K.

On the etiology of lactation mastitis. Cesk. gyn. 27 [41] no.6/7:
494-501 Ag '62.

1. II. gyn.-por. klin. fak. vseob. lek. KU v Praze, predn. prof. dr.
J. Lukas, DrSc. Katedra mikrobiol. a epidemiol., vedouci prof. dr.
Fr. Patocka, DrSc. Mikrobiol. odd. fak. det. lek. KU v Praze.
(MASTITIS) (STAPHYLOCOCCAL INFECTIONS)
(PUERPERAL INFECTION)

CEE, K.

Modification of the surgical technic in abortion (extraovular lavage in single-stage instrumental evacuation of the uterus). Cesk. gynek. 27 no.9:657-662 N '62.

1. II gyn. por klin. KU v Praze, prednosta prof. dr. J. Lukas, DrSc.
(ABORTION THERAPEUTIC)

CEE, K.; MISINGER, I.; SCHON, E.

Relation of vaginal biocenosis to inflammatory complications following interruption of pregnancy. Cesk. gyn. 27 [41] no.6/7:446-455 Ag '62.

1. Katedra mikrobiol. a epidemiol. fak. vseob. lek. KU v Praze,
ved. prof. dr. F. Patocka, DrSc. II. gyn.-por. klin. fak. vseob.
lek. KU v Praze, prednosta prof. dr. J. Lukas, DrSc.
(ABORTION THERAPEUTIC) (VAGINA) (MICROBIOLOGY)

STASTNA, J.; KANKA, J.; CEE, K.; SCHON, E.

The level of staphylococcal α -antitoxin and antileukocidin in
lactation mastitis. Cas. lek. cesk. 101 no.26:822-826 29 Je '62.

1. Mikrobiologicke oddeleni fakulty detskeho lekarstvi KU v Praze,
prednosta prof. dr. V. Kubelka --- II. gynekologicko-porodnicka
klinika KU v Praze, prednosta prof. dr. J. Lukas --- Katedra mikrobiologie
fakulty vseobecneho lekarstvu KU v Praze, prednosta prof. dr.
F. Patocka.

(PUERPERIUM blood) (MASTITIS immunol)
(STAPHYLOCOCCAL INFECTIONS immunol)

CEE, K.

Contribution to the surgical technic and to the problem of
injury in induced abortion. Cesk. gyn. 28 no.3:178-185
Ap '63.

1. II por.-gyn. klin. fak. vseob. lek. KU v Praze, prednosta
prof. dr. J. Lukas, DrSc.
(ABORTION, THERAPEUTIC) (ABORTION, LEGAL)

KANKA,J.; SCHON,E.; CEE,K.

Contribution to the therapy of lactation mastitis. Cesk. gynek.
28 no.10:649-654 D'63.

1. II. gyn. - por. klin. fak. vseob. lek. KU v Praze (prednosta
prof. dr. J.Lukas, DrSc); Katedra mikrobiol. a epidemiol. fak.
vseob. lek. KU v Praze (ved. prof. B.Patocka, DrSc.).

*

KANKA, J.; SCHON, E.; CEE, K.

Attempt at clinical classification of lactation mastitis.
Cesk. gynek. 28 no.9:627-632 N'63.

1. II gyn. - por. klinika fak. vseob. lek. KU v Praze
(prednosta prof.dr. J.Lukas, DrSc.) ; Katedra mikrobiologie
a epidemiologie fak. vseob. lek. KU v Praze (vedouci prof.
dr. Fr.Patocka, DrSc).

X

CETELIN, PAVEL

Chau
~~7-p-Nitroacetophenone~~ Ota Wichterle and Pavel Cetelin
 Czech. 84,638, Oct. 1, 1953. ~~7-O₂NC₆H₄Ac (I) was~~
 in a two-step reaction involving conversion of 5-nitroacetone
 (II) to its hydroperoxide by autooxidation followed by de-
 compn. in the catalytic presence of Cu salts. In a cylindri-
 cal reactor O₂ was bubbled at a rate 10 l./hr. and 125°
 through a mixt. of 82.2 g. II and 0.0375 g. H₂O₂ contg.
 traces of a satd. aq. soln. of NaOH. After bubbling through
 30 l., 50 l., and 70 l. O₂ 3 times 1 ml. satd. aq. soln. of Cu-
 (NO₃)₂ was added at each interval. After cooling, the mixt.
 was extd. by shaking with three 15-ml. portions of dil.
 H₂SO₄ (1:5) and the aq. layer sepd. The oily residue was
 washed, dried and *distd.* at 0 mm., yielding 65.64 g. non-
 reacted II, b. below 135°, 4.10 g. I, b. 145-52°, and 3.12 g.
 yellow oil, b. above 160°. The conversion was 6%, the
 yields were 80.15%.

2

AA
 [Signature]

Preparation and decomposition of p-nitro-o-toluy hydro-
peroxide Ojo Wichtige and Pavri, Chem. Ind. (Mosk.)
1964, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637

ANAL. Calcd for $C_{10}H_{10}O$: C, 88.10%; H, 11.90%. Found: C, 88.1%; H, 11.9%. IR (KBr): 1640 (C=O), 1600 (C=C), 1510 (C=C), 1450 (C=C), 1380 (C=C), 1320 (C=C), 1280 (C=C), 1240 (C=C), 1180 (C=C), 1140 (C=C), 1100 (C=C), 1060 (C=C), 1020 (C=C), 980 (C=C), 940 (C=C), 900 (C=C), 860 (C=C), 820 (C=C), 780 (C=C), 740 (C=C), 700 (C=C), 660 (C=C), 620 (C=C), 580 (C=C), 540 (C=C), 500 (C=C), 460 (C=C), 420 (C=C), 380 (C=C), 340 (C=C), 300 (C=C), 260 (C=C), 220 (C=C), 180 (C=C), 140 (C=C), 100 (C=C), 60 (C=C). 1H NMR (CDCl₃): δ 7.2 (d, 2H, H_{ar}), 6.8 (d, 2H, H_{ar}), 6.4 (d, 2H, H_{ar}), 6.0 (d, 2H, H_{ar}), 5.6 (d, 2H, H_{ar}), 5.2 (d, 2H, H_{ar}), 4.8 (d, 2H, H_{ar}), 4.4 (d, 2H, H_{ar}), 4.0 (d, 2H, H_{ar}), 3.6 (d, 2H, H_{ar}), 3.2 (d, 2H, H_{ar}), 2.8 (d, 2H, H_{ar}), 2.4 (d, 2H, H_{ar}), 2.0 (d, 2H, H_{ar}), 1.6 (d, 2H, H_{ar}), 1.2 (d, 2H, H_{ar}), 0.8 (d, 2H, H_{ar}), 0.4 (d, 2H, H_{ar}), 0.0 (d, 2H, H_{ar}).

[illegible]

CEFELIN PAVEL

CZECHOSLOVAKIA/Physical Chemistry - Kinetics, Combustion.
Explosions, Topochemistry. Catalysis,.

B-9

Abs Jour : Ref Zhur - Khimiya, No 8, 1958, 24214

Author : Wichterle Oto, Cefelin Pavel

Inst : -

Title : Kinetics of Decomposition of Alpha-Cumylhydroperoxide and
of Its p-Nitroderivative in Acid Medium.

Orig Pub : Chem. listy, 1957, 51, No 4, 747-751; Sb. Chekhosl. khim.
rabot, 1957, 22, No 4, 1083-1087

Abstract : A study of the kinetics of decomposition of hydroperoxides
of alpha- cumyl (I) and p-nitro-alpha-cumyl (II) in acid
medium (50% $\text{CH}_3\text{COOH} + \text{H}_2\text{SO}_4$), which result in the formation
of the corresponding phenols and acetone. The decomposi-
tion takes place as a reaction of 1-st order in relation
to the hydroperoxide. Energy of activation is 20.6 kcal/
mole for I and 27.2 kcal/mole for II. Logarithm of the
quantity preceding the exponent is 9.56-10.21 for I and

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Determination of ϵ -caprolactam in its polymer by the Kjeldahl method. Pavel Cefelin and Edward Sittler (Vysoká škola chem. technol., Prague). *Chem. listy* 51, 1310-2 (1957).—The Kjeldahl method is suitable for detg. the content of ϵ -caprolactam (I) in aq. solns. as well as in the polycapronamide (II). A 25-ml. sample contg. 0.03 g. I is (vapid. in a 300-ml. Kjeldahl flask with 10 ml. concd. H_2SO_4 until white fumes or H_2SO_4 evolve, and 3 g. of a catalyst prep'd. by mixing 90 parts K_2SO_4 , 5 parts V_2O_5 , and 2 parts black Se is added. The flask is heated with a Tecu burner having a flame 13 mm. in diam. and 50-60 mm. high at a distance of 40 mm. from the gauze. The mist. is alkalized with 90 ml. 30% NaOH and the NH_3 distd. 10 min. into 50 ml. of 0.01N H_2SO_4 contg. 2 drops of a soln. of 0.093 g. methylene blue and 0.125 g. methyl red in 100 ml. 95% EtOH, and the excess acid is titrated with 0.01N NaOH. To det. I in II (7.5 g.) is dissolved in concd. H_2SO_4 (21 ml.), the soln. dild. to 1 l. with H_2O , a 40-ml. aliquot is treated with 75 ml. H_2O (after washing the pipet with 8 ml. 30% H_2SO_4), the pptd. II is filtered off through a blue-band filter, washed 3 times with hot H_2O , and the filtrate worked up as described. M. Hudlick

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C E F E L I N, P.

AUTHORS: Wichterle, O., Sittler, E. and Čefelín, P.
TITLE: Study of the Equilibrium in Alkaline Polymerization of 6-Caprolactam (Studium rovnováhy alkalické polymerace 6-kaprolaktamu)
PERIODICAL: Chemické listy, 1958, Vol 52, Nr 11, pp 2073 - 2080 (Czechoslovakia)

ABSTRACT: The work concerns the determination of the equilibrium conversion and the average degree of polymerization of polymeric 6-caprolactams, prepared by alkaline catalysts. The temperature dependence of the conversion and degree of polymerization was established, as well as their dependence on amount and type of catalyst. On the whole, few works have been published dealing with the alkaline polymerization of caprolactams. The author deals in the main with a systematic study of this alkaline polymerization, mainly from the point of view of its industrial utilization, from the kinetics of polymerization shortly after the start of the reaction. All imports so far on the alkaline polymerization of caprolactam stress the need to exclude water rigidly from the system but no author has made a quantitative examination of the influence of water on the course of alkaline polymerization.

Experimental - Substances Used: The 6-caprolactam used was purified by three recrystallizations of the technical product from acetone and from thiophene, respectively. It was dried, first of all, at 50°C under reduced pressure, then at 2-5 mm for 48 hours. The dried material was stored in a desiccator over KOH before weighing out it for the experiment. Sodium ethylcarbamate was prepared by precipitating sodium ethylate from its solution in absolute alcohol by the passage of CO₂. The precipitate, filtered off, was dried for several days at 2-5 mm over P₂O₅ in a desiccator.

Sodium phenylacetate was prepared by the neutralization of phenylacetic acid and then purified by crystallizing from a mixture of benzene and ethylalcohol and, after drying, preserved over P₂O₅. Both catalysts were re-dried in vacuo at 10-12 mm for 12-16 hours at ordinary temperatures.

Study of the Equilibrium - Pure triethanol was obtained by two distillations of the crude product with zinc dust and with barium carbonate. Polymerization. The catalyst was weighed into the thoroughly dried and cooled flask of the polymerization apparatus (described by J. Kalčík and Šabenda (Ref 14 - "Reports of the International Symposium on Macromolecular Chemistry", Prague, 1957, Communication Nr 11) with an accuracy of 0.01 mg and to this was added the caprolactam with an accuracy of 0.01 g in such quantities as to give the required catalyst concentration. After setting up the apparatus and the sealing off of the weighing tubes, contents were dried at 1-5 mm and at normal temperatures for 36-48 hours in a stream of dry nitrogen. After the sealing off of the lower capillary and the solution of the catalyst with constant stirring, the apparatus was cooled to the temperature of the lower capillary and the solution of the catalyst by heating. The flask was then placed in a salt bath for the stirring. Fixed above the surface of the fusion mixture, was submerged with the lower ampoule parts in a salt bath for polymerization time and temperature. In the experiments with polymerization time above six hours, the ampoule was first cooled at 1-4 hours (according to the speed of decomposition

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of the catalyst) so that a larger part of gaseous products might escape. In the polymerizations in the presence of water, the catalysts were weighed with an accuracy of ± 0.1 mg in thin tubes and joined to the solution of the catalysts immediately sealed.

Determination of the Degree of Conversion: The degree of conversion was determined by the Kjeldahl method in the re-dried, finely ground polymeric materials from the lower third of the polymer plug.

Determination of the Average Degree of Polymerization: Fine shavings of the polymer were extracted in a Soxhlet apparatus with water for 16 hours. After extraction the sample was dried for 36 hours at 50°C and 10 mm. Hg. The extracted and dried polymer was weighed in a 25 ml. volumetric flask in amounts of 0.1 g. and 0.2 g. (about 20% of the amount of the polymer in the original sample). After dissolving the solution was equilibrated at 25°C and then filled up to the mark with trisecol.

Viscometric measurement was carried out in an Ubbelohde viscometer with capillary No. 11. The solution of the polymer in trisecol was filtered through a sintered glass filter G1 into the viscometer. Measurements were carried out at 25 ± 0.002 °C. The results taken from the average of five consecutive readings which did not differ more than 0.2% from each other. The internal viscosity (η) of the solution was calculated from one measurement according to the Huggins extrapolation equation prepared for trisecol by Rybníček (Ref 17):

$$[\eta] = \frac{\sqrt{1.24\eta_{sp}} + 1 - 1}{0.67 \cdot c}$$

where $\eta_{sp} = \eta_{rel} - 1$ and c is the concentration of the polymer (g/100 ml. solution). This equation is well suited for the extent of the degree of polymerization encountered in these experiments. The average degree of polymerization was calculated from the internal viscosity according to the equation $P = 92(\eta)^{1.61}$.

Results: The course of caprolactam polymerization was measured at 160, 180, 200, 220, 240 and 260°C and with a sodium ethyl carbonate concentration of 0.75 mol %; further catalyst concentrations of 0.5, 0.3 and 1.0 mol % were used at 240°C. In using sodium phenylacetate as a catalyst the course of polymerization was measured at a temperature of 220°C. All polymerizations had from the beginning of the course of conversion, the same character and as an example the course of various polymerizations at different temperatures and catalyst concentrations are given (Figure 1). Linearity holds between the logarithm of the period required to establish equilibrium and temperature (Figure 3) and it is found that with phenylacetate the polymerization occurs substantially slower than with ethylcarbonate. The final degree of polymerization is temperature dependent in a manner which is shown in Figure 4. The equilibrium conversion, even though, in the region of the equilibrium there is no such sharp change (Figure 6) and further it (P) is a function of (mol %)- $1/2$ as with the polymerization with sodium ethyl carbonate. The degree of polymerization which is finally

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obtained must not be considered as the equilibrium one, because in the period in which this degree of polymerization is established, transamidation reactions occur which require catalysis for side reactions. In this, the final degree of polymerization differs from the equilibrium degree of polymerization which may obtain in the equilibrium system in the polymerization with water. Actually "dead" by alkaline polymerization is that with it a correspondingly higher conversion not possible to obtain. Polymerization by keeping it at a definitely lower temperature than that at which it was polymerized (Table 1). The final conversion value may correctly be considered as the equilibrium value because in the period that is still occurring as is shown by the transamidation, the degree of polymerization. The dependence of change in the degree of polymerization on the amount of water added is given (Figure 8). It is possible to conclude that the more the water approaches the necessary to obtain equilibrium, the longer the period of 6-Caprolactam

Discussion: Absolute values for equilibrium conversion obtained by the authors for alkaline polymerization of 6-caprolactam may not be taken as the equilibrium values, because the actual analytical method used. In both cases, the equilibrium conversion is exclusively a function of temperature and is concerned with the pure thermodynamic equilibrium between cyclic and linear molecular systems. The dependence of the conversion on temperature has a similar character in both ways of polymerization; of course, the course ascertained by the authors for the above mentioned function is more consonant with a marked gradient in the region of polymer melting. It is possible to explain this gradient as a gradual change of volume for the reacting portion and another for the amorphous fusion mixture. The time change of the degree of polymerization attains a maximum shortly after the start of the reaction and then falls again - Grishl (Ref. 2) claims that it is after a long period of polymerization with sodium, the polymer attains a constant degree of polymerization. This latter finding is not in accordance with the authors' observations. On the other hand, it is not possible to read off critically the shortest period in which the final degree of polymerization is attained. The "dead" polymer, obtained after 96 hours, possibly shows traces of polymerization activity. The gradual fall of the degree of polymerization to a constant value, corresponding to the "dead" polymer may only be explained by the fact that active anions frequently disappear. The increasing degree of polymerization with falling temperature is caused on the one hand by a slower decomposition of the catalyst and on the other by a slower reduced velocity of the transamidation reaction. The catalytic activity probably depends on the basicity of the individual catalyst and does not, of course, have anything in common with the velocity of the initiating reaction (decomposition of catalyst); catalytically more "active" bases achieve, under the same conditions, a lower degree of polymerization.

Card 8/11 depolymerization and Kralick and Sebenda (Ref. 14) found that

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By comparing results, it is possible to conclude that the presence of water leads to a slowing down of alkaline polymerization (the reaction is slower than hydrolytic polymerization) probably not only as a result of the destruction of a definite portion of the catalyst but also as a result of the effect of other factors: in the molar excess of water content over catalyst content, perhaps hydrolytic polymerization results. The changes in degree of polymerization are, of course, small because the degree of polymerization is, in this case, basically determined by the amount of added water, which as a result of the saponification of the lactam is bound into the polymer. From this it is to be seen that the polymerization is not only retarded but the course of the degree of polymerization is altered. With amounts of water higher than equimolar, hydrolytic polymerization occurs and this is caused by the excess of water. Water is utilized in the saponification of the lactam which proceeds until the ratio of water to catalyst reaches the ratio of 1:1.

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There are 8 figures, 2 tables and 21 references, 9 of which are Czech, 10 in Russian, 2 in Polish, 1 Japanese, 7 German and 1 English.

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Determination of the specific gravity of products of polymerization of ϵ -caprolactam. / Pavel Čefelín, Jiří Trekoval, and Zdeněk Drbálek (Vysoká škola chem.-technol., Prague). Chem. listy 52, 1243-8 (1958). From dilatometric measurements an empirical equation was derived for the sp. gr. d of the polymer melt as a function of the temp. t and of the polymer content: $d = 1.0917 - 8.66 \times 10^{-4} + (3.00 \times 10^{-4} + 3.21 \times 10^{-4})C$, where C is the wt. fraction of the polymer; it is applicable above 210°.

E. Erdős

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